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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,977	07/14/2000	Aviad Zlotnick	06727/000H417-US0	7345

7278 7590 05/11/2010

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EXAMINER	
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ART UNIT	PAPER NUMBER
2178	

MAIL DATE	DELIVERY MODE
05/11/2010	PAPER

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte AVIAD ZLOTNICK

Appeal 2009-014141
Application 09/616,977
Technology Center 2100

Decided: May 11, 2010

Before JOHN A. JEFFERY, LEE E. BARRETT, and JEAN R. HOMERE, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 4-19, and 22-37. We have jurisdiction under 35 U.S.C. § 6(b).[1] We affirm-in-part.

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[1] Appellant waived attendance at an oral hearing scheduled for May 4, 2010. *See* Confirmation Waiving Oral Hearing Attendance, filed Mar. 18, 2010.

STATEMENT OF THE CASE

Appellant's invention uses a network-based system to extract data from filled-in form documents. Specifically, a network-based "directory service" receives images from a client, codes the information, and verifies whether the information is coded correctly. The checked, coded information is then returned to the client over the network and payment received based on various terms, including the number of fields processed. *See generally* Spec. 3-8; Figs. 1, 3. Claim 1 is illustrative with key disputed limitations emphasized:

1. A method for processing documents including information in a predefined domain the method comprising:

defining a directory of data relating to the predefined domain;

receiving from a client via a computer network images of a number of fields containing respective information;

processing the images to code the information;

looking up the coded information in the directory so as to check whether the information coded correctly;

returning the checked, coded information over the network to the client; and

receiving payment from the client in exchange for coding and checking the information according to the number of the fields processed, based upon a price per field processed.

The Examiner relies on the following as evidence of unpatentability:

Lorie	US 5,933,531	Aug. 3, 1999
DiPiazza	US 6,028,970	Feb. 22, 2000
Jansen	US 6,243,450 B1	June 5, 2001 (filed Dec. 28, 1998)

THE REJECTIONS

1. The Examiner rejected claims 1, 5-11, 19, 23-29, 35, and 36 under 35 U.S.C. § 103(a) as unpatentable over Lorie and Jansen. Ans. 3-6.[2]
2. The Examiner rejected claims 4 and 22 under 35 U.S.C. § 103(a) as unpatentable over Lorie, Jansen, and DiPiazza. Ans. 6-7.
3. The Examiner rejected claims 12-16, 18, 30-34, and 37 under 35 U.S.C. § 103(a) as unpatentable over Lorie and DiPiazza. Ans. 7-9.
4. The Examiner rejected claim 17 under 35 U.S.C. § 103(a) as unpatentable over Lorie, DiPiazza, and Jansen. Ans. 10.

CLAIM GROUPING

Regarding the obviousness rejection over Lorie and DiPiazza, Appellant argues the following groups separately: (1) independent claims 12, 30, and 37 (App. Br. 11-14); and (2) claims 15 and 32 (App. Br. 15-16). We therefore treat these groups separately (and include claims 13, 14, 16, 18, 31, 33, and 34 not separately argued in group (1)), and select claims 12 and 15 as representative of each group. *See* 37 C.F.R. § 41.37(c)(1)(vii).

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[2] Throughout this opinion, we refer to (1) the Appeal Brief filed August 17, 2007; (2) the Examiner's Answer mailed October 30, 2007; and (3) the Reply Brief filed December 6, 2007.

THE OBVIOUSNESS REJECTION OVER LORIE AND JANSEN

Regarding independent claim 1, the Examiner finds that Lorie's document processing method discloses all recited steps except for receiving payment based on a price per unit service. Ans. 3-4. The Examiner, however, cites Jansen for teaching this feature in concluding that the claim would have been obvious. Ans. 4.

In reaching this conclusion, the Examiner acknowledges that Jansen is based on a time-based payment scheme, but nonetheless asserts that "many different units of service" were purportedly "notoriously well known in the art" at the time of Appellant's invention, including the amount of bandwidth used. Ans. 10-11. The Examiner reasons that since paying a price based on a unit of service was well known, there is ostensibly a "minimal" difference between charging a price based on (1) a number of fields processed, and (2) an amount of services rendered (e.g., bandwidth access). This "minimal" difference, the Examiner contends, would have been obvious to ordinarily skilled artisans. Ans. 11.

Appellant challenges this reasoning as unsupported by any documentary evidence, and argues that Jansen's time-based charging scheme is completely different than charging by the number of processed fields. App. Br. 8; Reply Br. 2. Appellant adds that there is no teaching or suggestion to transform Lorie's integrated document-processing system into a network-based service (i.e., involving sending images and coded information over a network) as claimed. App. Br. 9-10; Reply Br. 3.

The issue before us, then, is as follows:

ISSUE

Under § 103, has the Examiner erred in rejecting claim 1 by finding that Lorie and Jansen collectively would have taught or suggested:

(1)(a) receiving images of a number of fields from a client, and (b) returning checked and coded information via a computer network?

(2) receiving payment from the client in exchange for coding and checking the information according to the number of fields processed, based on a price per field processed?

FINDINGS OF FACT (FF)

1. Lorie pertains to optical character recognition (OCR) verification and correction, and discusses various conventional techniques to (1) isolate; (2) segment; and (3) recognize images within small fields in forms (e.g., handwritten information filled in the form's fields). Moreover, using context information in conjunction with OCR improves accuracy. Lorie, col. 1, l – col. 2, l. 9.

2. Lorie's Figure 4 shows a typical system 4 for realizing the invention, including a user interface 14, CPU 8 and I/O 16 interconnected via bus 6. Lorie, col. 4, ll. 33-47; Fig. 4.

3. Lorie's invention can be implemented using standard programming techniques. Any such program(s) may be embodied or provided within computer-readable or -usable media, such as disks, memories, or "any transmitting/receiving medium such as the Internet or other communications network or link . . . ." Lorie, col. 8, ll. 51-68.

4. An apparatus for making, using, or selling Lorie's invention may be one or more processing systems including a CPU, memory, storage devices, communication links, communication devices, servers, and I/O devices. Lorie, col. 9, ll. 1-9.

5. Jansen discloses a kiosk for vending public multimedia services that determines usage cost based on (1) time of use, and (2) cost per unit time. Jansen, Abstract; col. 12, ll. 32-65; Figs. 1, 2, 9-14.

PRINCIPLES OF LAW

An Examiner's use of Official Notice unsupported by documentary evidence should only be taken when the facts so noticed are "capable of such instant and unquestionable demonstration as to defy dispute." *See In re Ahlert*, 424 F.2d 1088, 1091 (CCPA 1970) (citations omitted). Moreover, if the Examiner's assertion of Official Notice is adequately traversed, the Examiner must provide documentary evidence in the next Office Action to maintain the rejection. Manual of Patent Examining Procedure § 2144.03(C), 8th ed., Rev. 6, Sept. 2007 ("MPEP").

To be patentable under § 103, an improvement must be more than the predictable use of prior art elements according to their established functions. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007).

ANALYSIS

Based on the record before us, we find error in the Examiner's obviousness rejection of independent claim 1 which calls for receiving payment from the client according to the *number of fields processed*, based on a *price per field* processed.

We begin by noting that it is undisputed that Jansen fails to disclose any pricing scheme whatsoever based on processed fields, let alone charging by the number of fields. Rather, Jansen charges for time of use—not fields processed. FF 5.

The Examiner concedes as much, but nonetheless maintains that paying a price based on different "units of service" (which are said to include not only usage time as in Jansen, but also bandwidth usage) was well known at the time of the invention. Ans. 10-11. As such, the Examiner reasons, there is ostensibly only a "minimal"—and therefore obvious—difference between charging a price based on (1) a number of fields processed as claimed, and (2) an amount of services rendered (e.g., bandwidth access). Ans. 11.

This contention is unavailing for it not only fails to provide any evidentiary basis for the Examiner's underlying assertions (which are tantamount to officially noticing these facts), but its reasoning is problematic even if we were to accept these officially-noticed facts as true.

In short, even assuming that it was known at the time of the invention to charge customers for particular "units of service" including bandwidth access as the Examiner asserts, that hardly means that it would have been obvious to charge based on *other* types of "service units," including the recited number of processed fields.

To allege that there is only a "minimal"—and purportedly obvious—difference between two diverse pricing schemes (bandwidth usage and number of processed fields) is simply unsupported by any evidence on this record and is therefore untenable. That this speculative line of reasoning was raised for the first time in the Examiner's Answer as Appellant indicates

(Reply Br. 2) only further taints the Examiner's problematic position. Moreover, the Examiner did not respond to Appellant's challenge to the lack of evidentiary basis for these newly-raised assertions (Reply Br. 2)—a crucial error on this record. *See* MPEP 2144.03(C) (requiring Examiners to provide documentary evidence responsive to traversals of officially-noticed assertions).

Although this error is dispositive of reversal of claim 1, we nonetheless disagree with Appellant's contention (App. Br. 9-10; Reply Br. 3) that there is allegedly no teaching or suggestion to transform Lorie's integrated document-processing system into a network-based service. That said, we agree with Appellant (Reply Br. 3) that the Examiner's reliance on Lorie's statement that the inventive program can be embodied on *computer readable media* including a network-based medium (Ans. 12; FF 3) is problematic in this regard.

But Lorie nonetheless teaches in the very next paragraph that an *apparatus* for "making, using, or selling" Lorie's invention can include a CPU, memory, storage devices, *communication links*, *communication devices*, *servers*, and I/O devices. FF 4; emphasis added. Based on these network-capable options, we see no reason why at least some components of Lorie's "integrated" OCR system in Figure 4 (FF 2) could not have been implemented via a network (e.g., obtaining and sending images from a client to a remote checking and coding device via the network). That the system in Lorie's Figure 2 includes some of the very components referred to in the passage noted above (FF 4) only bolsters this conclusion. In short, we find

that not only does Lorie itself suggest such a network-based enhancement (*see* FF 4), such an enhancement is also tantamount to the predictable use of prior art elements according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

That said, we cannot sustain the Examiner's obviousness rejection for the reasons noted above regarding the lack of any teaching or suggestion of receiving payment from the client in exchange for coding and checking the information according to the number of fields processed based on a price per field as claimed. Accordingly, we reverse the Examiner's rejection of independent claim 1 and independent claims 19 and 35 which recite commensurate limitations. We also reverse the Examiner's rejection of dependent claims 5-11, 23-29, and 36 for similar reasons.[3]

THE OBVIOUSNESS REJECTION OF CLAIMS 4 AND 22

Since the Examiner has not shown that the cited secondary reference to DiPiazza cures the above-noted deficiencies, we will also not sustain the Examiner's rejection of claims 4 and 22 over Lorie, Jansen, and DiPiazza.

THE OBVIOUSNESS REJECTION OVER LORIE AND DIPIAZZA

Regarding representative claim 12, the Examiner finds that Lorie's form processing method includes every recited step except for defining the directory by selecting data specific to the predefined domain from one or

[3] Since our decision in this regard is dispositive of reversal of these claims, we therefore need not reach Appellant's separate arguments regarding claims 6 and 24 (App. Br. 14-15; Reply Br 4-5).

more general databases. Ans. 7-8. The Examiner, however, cites DiPiazza's rule-based error detection functionality as teaching this feature in concluding the claim would have been obvious. Ans. 8, 12.

Appellant argues that the cited prior art does not teach or suggest defining the directory for a predefined domain by selecting data specific to the domain from one or more general databases as claimed. Although Appellant acknowledges that DiPiazza's rule bases (which the Examiner equates to the recited directory) are context-specific, Appellant nonetheless maintains that the rules bases are not used for information lookup. App. Br. 11-13; Reply Br. 4. Appellant also reiterates a similar argument made in connection with claim 1, namely that there is allegedly no teaching or suggestion to transform Lorie's integrated system to a network-based system. App. Br. 13.

Regarding claim 15, Appellant argues that Lorie does not teach or suggest transmitting images from a client over a network for coding and checking.

The issues before us, then, are as follows:

ISSUES

Under § 103, has the Examiner erred by finding that Lorie and DiPiazza collectively would have taught or suggested:

(1) receiving information filled into form fields from a client via a computer network as recited in claim 12?

(2) defining, in advance of reading out form contents for processing, a directory of data relating to a predefined domain by selecting data specific to the domain from one or more general databases as recited in claim 12?

(3) receiving a form field image from the client via a computer network for coding and checking as recited in claim 15?

ADDITIONAL FINDINGS OF FACT

6. DiPiazza's system enhances OCR by applying a "rule base" comprising a set of rules or combinations of rules that may be associated with received electronic bit-map data (i.e., an incoming fax). To this end, after applying OCR to the received bitmap data, the system (1) determines the bitmap's associated context type, and (2) generates or selects predetermined rule bases according to the recognized context type; and (3) applies the rule bases to the received data. DiPiazza, Abstract, col. 5, ll. 3-8; col. 5, l. 54 – col. 6, l. 12; col. 7, ll. 6-30; col. 10, ll. 17-35; Figs. 1B-1D, 2A.

7. Different types of business forms, for example, or other document types may be recognized by context type, and corresponding rule base(s) are determined for that context type. For example, a rule base or set of rule bases for a business order form (e.g., a context type) may be assembled in real time and/or selected separately from a rule base for other context types (e.g., magazine pages or fax cover sheet). DiPiazza, col. 5, ll. 9-17; Fig. 5.

8. DiPiazza discusses various types of known data rules for correcting erroneous data including various exemplary rules associated with business order forms, such as (1) an instance verifier; (2) type verifier; (3) position verifier; (4) functional verifier; (5) comparative verifier; (6) mathematical verifier. DiPiazza, col. 2, ll. 7-67; Fig. 5.

9. Rules are stored in memory tables of memory 156 from which an appropriate rule base is generated according to the determined context type. Memory 156 also comprises preassembled rule bases which are selectable according to context type. DiPiazza, col. 6, ll. 7-12; Figs. 1B, 1D.

10. There may not, however, be sufficient memory 156 or resources locally to assemble appropriate rule bases for various context types. Therefore, it may be necessary to go beyond the boundaries of the computer or device (via data transmitter 158) to assemble a rule base for a context type. For example, a postal zipcode directory table may be stored as a shared resource for application by many OCR devices either locally or remotely via Internet or other data transmission services. Other examples include credit card number validation services, banking data services, telephone number/area code verification services, etc. DiPiazza, col. 6, l. 50 – col. 7, l. 5; Fig. 1C.

11. DiPiazza's "database enhancement module" enables both real-time and long-term learning with respect to rules and corresponding rule bases. DiPiazza, col. 8, ll. 51-65; col. 12, l. 15 – col. 13, l. 40; Figs. 3-4.

ANALYSIS

Claims 12-14, 16, 18, 30, 31, 33, 34, and 37

We will sustain the Examiner's rejection of representative claim 12. First, we find unavailing Appellant's argument (App. Br. 13) that there is allegedly no teaching or suggestion to transform Lorie's integrated system to a network-based system. As we indicated previously regarding claim 1, we find that Lorie amply teaches such a network-based enhancement. *See* FF 4.

Second, we see no error in the Examiner's reliance on DiPiazza's rule-based functionality for teaching the recited data selection limitations of claim 12. DiPiazza's "rule bases" are essentially collections (i.e., directories) of rules that are generated according to a certain "context" (i.e., "domain"), such as that associated with a business form, magazine page, or fax cover sheet. *See* FF 6-7. And these rule bases are defined by selecting data (i.e., rules) that are stored in various databases, namely tables in the OCR device's memory, or in remote databases (e.g., a zipcode directory table stored as a shared resource, credit card number validation service, banking data services, telephone number/area code verification services, etc.). FF 9-10. In short, nothing in the claim precludes these databases from meeting the recited "general" databases given its scope and breadth.

Although Appellant argues that DiPiazza's rule bases are not used for information lookup (App. Br. 11-13; Reply Br. 4), we note that the rule bases are for verification (FF 8, 10) which, by its very nature, would have at least suggested a data lookup and comparison to conduct the verification. And even assuming that DiPiazza's "database enhancement module" and its corresponding learning features (FF 11) is separate from the rule bases as Appellant argues (App. Br. 12; Reply Br. 4), that is a distinction without a difference here, for DiPiazza's rule base functionality amply suggests the recited data selection limitations as noted above.

We are therefore not persuaded that the Examiner erred in rejecting representative claim 12, and claims 13, 14, 16, 18, 30, 31, 33, 34, and 37 which fall with claim 12.

Claims 15 and 32

We will also sustain the Examiner's rejection of representative claim 15 essentially for the reasons indicated previously regarding claim 1, namely the suggestion of implementing at least some components of Lorie's "integrated" OCR system (FF 2) via a network (e.g., obtaining and sending images from a client to a remote checking and coding device via the network). We are therefore not persuaded that the Examiner erred in rejecting representative claim 15, and claim 32 which falls with claim 15.

THE OBVIOUSNESS REJECTION OVER LORIE, DIPIAZZA, AND JANSEN

We will not, however, sustain the Examiner's rejection of claim 17 which calls for receiving payment according to the number of forms for which information in the field was checked for correctness. Although this is a different basis for payment than that recited in claim 1 (i.e., the number of fields), the Examiner nonetheless relies again on Jansen's *time*-based charging scheme as allegedly teaching the recited *form*-based payment system. *See* Ans. 10. But as we indicated regarding claim 1, we find this reliance on Jansen problematic at best.

As Appellant indicates (App. Br. 16), the Examiner has simply failed to show any logical connection between Jansen's time-based charging and charging by the number of forms checked as claimed. While we can see a correlation between (1) the number of forms that information is checked, and (2) the time it takes to do so (i.e., it takes longer to check more forms), the Examiner has not articulated the relevance, if any, of such a correlation to the recited payment method. Nor will we engage in such an inquiry here in the first instance on appeal.

We are therefore persuaded that the Examiner erred in rejecting claim 17.

CONCLUSION

Under § 103, the Examiner did not err in rejecting claims 12-15, 18, 30-34, and 37, but erred in rejecting claims 1, 4-11, 17, 19, 22-29, 35, and 36.

ORDER

The Examiner's decision rejecting claims 1, 4-19, and 22-37 is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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